

Application Serial No. 10/667,838
Reply to Office Action of January 30, 2007

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Docket: CU-3657

Amendments To The Claims

The listing of claims presented below will replace all prior versions, and listings, of claims in the application.

Listing of claims:

1. (Currently amended) A height adjusting apparatus for a suction brush of an upright vacuum cleaner, comprising:

a suction brush body comprised of a brush frame, which has a suction portion for sucking dust at a lower surface thereof and in which a height adjusting shaft can be disposed, the suction brush body having a brush cover for sealing an upper surface of the brush frame except for the suction port;

a height adjusting knob comprised of:

a cylindrical knob body;

a handle portion formed at an upper surface of the knob body, for rotating the height adjusting knob;

a flange portion protruding along an outer circumferential surface of the knob body and determining an inserting position of the knob body;

a fixing protrusion that seats into a fixing groove formed at an inner surface of a seating member and for controlling rotation of the handle, the fixing protrusion protruding from a surface of the flange portion; and

a cam curve portion at the bottom of the height adjusting knob, the cam curve portion being rounded,

the height adjusting knob being rotatably disposed in a seating portion of the

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suction brush body, the seating portion being comprised of a seating member formed in the brush frame and having a seating hole formed through the brush cover, formed in the suction brush body, the seating member being partially cut away to form a space for allowing the seating member to be elastically deformed; wherein multiple fixing grooves are formed in a length direction of the seating member to be apart from each other at regular intervals, and each fixing groove has a shape corresponding to the fixing protrusion;

the height adjusting knob and having a cam curve portion formed at a part of an end of the height adjusting knob inserted into the suction brush body, the cam curve portion having a height difference between a starting point and an end point thereof and a plurality of recessed grooves formed between the starting point and the end point;

a horizontal height adjusting shaft having a rod member attached to the height adjusting shaft and which extends upwardly and away from the height adjusting shaft, substantially orthogonal to the height adjusting shaft at its attachment point to the height adjusting shaft, to contact the cam curve portion of the height adjusting knob, the rod member causing the height adjusting shaft to be lifted up and down by the rotation of the height adjusting knob; and

a brush front wheel rotatably coupled to the height adjusting shaft;

2. (Cancelled)
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)

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6. (Cancelled)

7. (Cancelled)

8. (Currently amended) The apparatus of claim [[1]] wherein the number of multiple fixing grooves correspond to the number of recessed grooves of the cam curve portion.

9. (Currently amended) The apparatus of claim [[2]] 1 wherein the height adjusting knob is rotatably coupled to a shaft receiving groove formed a bottom surface of the brush frame.

10. (Previously presented) The apparatus of claim 9, wherein the shaft receiving groove communicates with a front wheel receiving hole formed through the brush frame so that the front wheel is not interfered with by the brush frame, and has a plurality of latching protrusions for preventing a separation of the height adjusting shaft.

11. (Original) The apparatus of claim 9, wherein the height adjusting shaft comprises: a shaft body connected at both ends with a brush front wheel; a rotary shaft connected at both ends to the shaft body, secured to the shaft receiving groove by a screw to rotate the height adjusting shaft; and a reinforcing rib disposed between the shaft body and the rotary shaft to prevent the shaft body from twisting.

12. (Original) The apparatus of claim 11, wherein the shaft receiving groove is communicated with the front wheel receiving hole formed in the brush frame so that the

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front wheel is not interfered with the brush frame.

13. (Original) The apparatus of claim 11, wherein the height adjusting shaft is made of an aluminum.